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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,496	02/27/2002	Yoichi Iihoshi	381NP/50962	8235

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EXAMINER

TRAN, BINH Q

ART UNIT PAPER NUMBER

3748

DATE MAILED: 02/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/083,496

Applicant(s)

IIHOSHI ET AL.

Examiner

BINH Q. TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 7-11, 15, 16 and 20 is/are rejected.
- 7) ☒ Claim(s) 4-6, 12-14, 17-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s): \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

Receipt and entry of Applicant's Preliminary Amendment dated February 27, 2002 is acknowledged.

#### *Drawings*

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "6" in Figure 4 has been used to designate both "piston" and "catalyst". A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

***Claims 1-3, 7-11, 15-16, and 20 are rejected under 35 U.S.C. 102 (e) as being anticipated by Yasui et al. (Yasui) (Patent Number 6,401,451 B1).***

Regarding claim 1, Yasui discloses an internal combustion engine diagnosis apparatus comprising a cleanup catalyst (e.g. 40, 42) arranged in an exhaust pipe of an internal combustion engine (10); and an HC adsorption catalyst (74) arranged in parallel to and downstream of said cleanup catalyst, during high temperature period said HC adsorption catalyst desorbing and cleaning up HC desorbed during low temperature period, wherein degradation of said HC adsorption catalyst is diagnosed based on temperature of said HC adsorption catalyst while HC is being desorbed from said HC adsorption catalyst (during HC desorbing period) (e.g. See Figures 11-35; col. 10, lines 7-67; col. 11, lines 1-37).

Regarding claims 2 and 7-8, Yasui discloses an internal combustion engine diagnosis apparatus comprising a cleanup catalyst (e.g. 40, 42) arranged in an exhaust pipe of an internal combustion engine (10); and an HC adsorption catalyst (74) arranged in parallel to and downstream of said cleanup catalyst (e.g. 40, 42), during high temperature period said HC adsorption catalyst desorbing and cleaning up HC desorbed during low temperature period, wherein degradation of said HC adsorption catalyst is diagnosed based on a gradient of temperature of said HC adsorption catalyst (74) during a period when temperature of said HC adsorption catalyst is within a range of 50 °C to 250 °C (e.g. See Figures 11-35; Steps 10-13; Steps 100-136; col. 6, lines 63-67; col. 13, lines 4-21; col. 19, lines 1-23).

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Regarding claims 3, 9, and 16, Yasui further discloses that the internal combustion engine comprises a temperature detector (400) for detecting temperature of said HC adsorption catalyst, and degradation of said HC adsorption catalyst is diagnosed based on a detected value of said temperature detector (See Fig. 38; col. 22, lines 25-67; col. 23, lines 1-67; col. 24, lines 1-17).

Regarding claim 10, Yasui further discloses that the desorbing time period exceeds a preset time, judgment of degradation of said HC adsorption catalyst is prohibited (e.g. See Figures 26-35; col. 15, lines 33-67; col. 16, lines 1-67).

Regarding claims 11, 15, and 20, Yasui further discloses that if accumulative value or a maximum value of a flow rate of air flowing into said internal combustion engine during said HC desorbing time period exceeds a preset value, judgment of degradation of said HC adsorption catalyst is prohibited; wherein said internal combustion engine comprises an air flow rate measurement instrument (14) for measuring or estimating a flow rate of air flowing into said internal combustion engine (e.g. See Figures 26-38; col. 24, lines 1-24).

*Allowable Subject Matter*

Claims 4-6, 12-14, and 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Since allowable subject matter has been indicated, applicant is encouraged to submit formal drawings in response to this Office action. The early submission of formal drawings will permit the Office to review the drawings for acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

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*Prior Art*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of five patents:

Dogahara et al. (Patent Number 5738832), Kanesaka et al. (Patent Number 5804148), Usami et al. (Patent Number 5761902), Tanaka (Patent Number 6158212), and Tanaka et al. (Patent Number 6012284) all disclose an exhaust gas purification for use with an internal combustion engine.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Binh Tran whose telephone number is (703) 305-0245. The examiner can normally be reached on Monday-Friday from 8:30 a.m. to 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (703) 308-2623. The fax phone number for this group is (703) 746-4561.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

BT  
February 20, 2003



Binh Tran  
Patent Examiner  
Art Unit 3748